"Some time ago," he says, "a boy brought in an egg found near a waterhole, which was placed with other eggs under a sitting hen, and in due course hatched out a wood-duck. The wood-duck was reared among a clutch of chickens, was as well tended as her other chicks by the mother hen, and reached adult age. On one occasion a hen brought out a brood of chickens, and the wood-duck kept in close companionship with the hen and chicks for several days, until the hen took umbrage at the duck's constant attendance, and several fights between the hen and duck ensued. Eventually the duck drove away the hen, and took sole charge of the chickens throughout the day, the hen following round disconsolately till night-fall each day, when the duck surrendered her charge, allowing the mother to brood over them at night, but again taking charge of them in the morning. This continued till the chickens were able to take care of themselves."

THE writer of the article on "The Opening of the Pasteur Institute" (NATURE, November 22), informs us that by an oversight a misprint occurs on p. 74, in the first line of the second paragraph. Class *C.* should read Class *A.*

THE additions to the Zoological Society's Gardens during the past week include a Black-eared Marmoset (*Hapale penicillata*) from South-East Brazil, presented by Miss B. Pollock; a Malbrouck Monkey (*Cercopithecus cynosurus*) from West Africa, presented by Mr. David Baumann; a —— Toad (*Bufo* ——) from California, presented by Mr. D. E. Cardinall; a North American Turkey (*Meleagris gallo-pavo*) from North America, presented by Mr. F. J. Coleridge Boles; a Tawny Owl (*Syrnium aluco*), European, deposited.

OUR ASTRONOMICAL COLUMN.

COMET 1888 *e* (BARNARD, SEPTEMBER 2).—Dr. L. Becker, who has recently computed elements for this comet by the method of variation of the distances, finds (*Dun Echt Circular*, No. 164) that the most probable orbit is hyperbolic in character, the residuals for the intermediate observations being much larger for the most suitable parabola than for the hyperbolic orbit.

The elements are as follow:—

$$T = 1889 \text{ January } 29{\cdot}90453 \text{ G.M.T.}$$

$$\left.\begin{aligned} \pi - \Omega &= 339^\circ\ 54'\ 32''{\cdot}1 \\ \Omega &= 357\ \ 15\ \ 59{\cdot}1 \\ \iota &= 166\ \ 22\ \ 24{\cdot}3 \end{aligned}\right\} \text{Mean Eq. } 1888{\cdot}0.$$

$$\begin{aligned} \log q &= 0{\cdot}2595204 \\ \log e &= 0{\cdot}0135800 \end{aligned}$$

Ephemeris for Greenwich Midnight.

1888.	R.A. h. m. s.	Decl. ° ′	Log Δ.	Log *r*.	Brightness.
Nov. 29	2 28 2	5 57·3 S.	0·0501	0·2971	12·1
Dec. 1	2 15 18	6 21·0			
3	2 3 9	6 41·4	0·0669	0·2928	11·4
5	1 51 40	6 58·4			
7	1 40 50	7 12·2	0·0887	0·2887	10·5
9	1 30 42	7 23·2			
11	1 21 15	7 31·5	0·1131	0·2847	9·6
13	1 12 29	7 37·5			
15	1 4 21	7 41·2 S.	0·1390	0·2810	8·7

The brightness on September 2 has been taken as unity.

Dr. Berberich has, however, computed parabolic elements using an observation made at Karlsruhe on October 28, the ephemeris from which satisfies well an observation obtained at Rome as recently as November 7.

According to Dr. Becker's ephemeris, the comet will pass within 1½′ of a bright nebula, 100 ♄ I Ceti, a little before midnight on December 10, and as the head of the comet is of very considerable size, the nebula will be completely involved in it. The moon will be near setting, so that, though the comet will be low, about 75° Z. D., spectroscopic observations might be obtained if the night were clear. Dr. Berberich's elements would place the transit some three hours later, when the comet would have set to English observers, but makes the transit nearly a central one.

COMETS FAYE AND BARNARD, OCTOBER 30.—The following ephemerides for these objects for Berlin midnight are by Drs. Lamp and Spitaler respectively (*Astr. Nach.*, No. 2867):—

	Comet 1888 *d* (Faye).		Comet 1888 *f* (Barnard, Oct. 30).	
1888.	R.A. h. m. s.	Decl. ° ′	R.A. h. m. s.	Decl. ° ′
Dec. 1	8 14 34	2 29·2 N.	10 19 27	8 50·8 S.
3	8 14 36	2 12·8	10 20 47	8 16·9
5	8 14 30	1 57·2	10 21 59	7 41·5
7	8 14 15	1 42·6	10 23 4	7 4·4
9	8 13 52	1 28·9	10 24 0	6 25·8
11	8 13 21	1 16·2	10 24 50	5 45·8
13	8 12 42	1 4·5	10 25 32	5 4·2
15	8 11 55	0 53·9	10 26 4	4 20·7
17	8 11 1	0 44·4	10 26 28	3 35·5
19	8 10 1	0 36·1 N.	10 26 45	2 48·8 S.

The brightness on December 19 of Faye's comet is 1·8 that of the brightness at discovery; of Barnard's, 0·9. Both comets change but slowly in brightness, as the distance from the earth is diminishing, whilst the distance from the sun is increasing.

THE SATELLITE OF NEPTUNE.—Mr. A. Marth pointed out in the *Monthly Notices* (vol. xlvi. p. 506), some two years ago, that the values for the inclination of the orbit of the satellite of Neptune and its ascending node, as deduced from the observations obtained in Malta in the years 1852 and 1864 by Lassell and Marth, and again at the Washington Naval Observatory from 1874 to 1884, show a well-marked, progressive, and regular change. Referring these values to the plane of the orbit of the planet, they are as follows:—

Date.	*n*. °	*i* (motion considered direct). °
1852	176·20	148·33
1864	180·41	146·19
1874	182·59	144·04
1883	184·31	142·38

Mr. Marth offered no theory by which to account for this change, but begged for continued observations. Prof. Asaph Hall also has more recently urged the necessity for further observation, and by fresh observers, avowing at the same time his suspicion that these changes are due to systematic errors in the observations. But M. Tisserand, in a late communication to the Academy of Sciences of Paris, shows that the changes can easily be explained by the theory of a slight flattening of the surface of Neptune. In this case the angle between the plane of the planet's equator and that of the orbit of the satellite will be constant, and the pole of the orbit will revolve in a small circle round the pole of the planet, a complete revolution taking more than 500 years. The inclination of the orbit of the satellite will be considerable, probably greater than 20°; but the flattening of the surface of Neptune can only be slight, too small to be detected by direct measurement. Further observations may enable the amount of the inclination to be more exactly determined, and, at the same time, will show whether the changes in question are due or not to this one cause alone.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1888 DECEMBER 2-8.

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

At Greenwich on December 2

Sun rises, 7h. 48m.; souths, 11h. 49m. 49·0s.; sets, 15h. 51m.: right asc. on meridian, 16h. 36·8m.; decl. 22° 5′ S. Sidereal Time at Sunset, 20h. 39m.

Moon (New on December 3, 10h.) rises, 6h. 3m.; souths, 10h. 56m.; sets, 15h. 39m.: right asc. on meridian, 15h. 42·7m.; decl. 15° 23′ S.

Planet.	Rises. h. m.	Souths. h. m.	Sets. h. m.	Right asc. and declination on meridian. h. m.	° ′
Mercury	6 26	10 51	15 16	15 37·8	18 26 S.
Venus	10 41	14 27	18 13	19 14·9	24 21 S.
Mars	11 18	15 24	19 30	20 11·8	21 25 S.
Jupiter	8 12	12 12	16 12	16 58·9	22 17 S.
Saturn	21 20*	4 46	12 12	9 32·3	15 38 N.
Uranus	3 6	8 31	13 56	13 17·3	7 30 S.
Neptune	15 22	23 6	6 50*	3 55·4	18 36 N.

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

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Dec		h.		
2	...	9	...	Mercury in conjunction with and 3° 23′ south of the Moon.
3	...	17	...	Jupiter in conjunction with and 2° 38′ south of the Moon.
3	...	18	...	Mars at least distance from the Sun.
6	...	2	...	Venus in conjunction with and 2° 4′ south of the Moon.
6	...	22	...	Mars in conjunction with and 0° 15′ south of the Moon.
8	...	23	...	Jupiter in conjunction with the Sun.

Saturn, December 2.—Outer major axis of outer ring = 42″·8 : outer minor axis of outer ring = 10″·0 : southern surface visible.

Variable Stars.

Star.	R.A. h. m.	Decl. ° ′		h. m.
U Cephei	0 52·4 ...	81 16 N. ...	Dec. 4,	23 46 *m*
Algol	3 0·9 ...	40 31 N. ...	,, 4,	6 15 *m*
			,, 7,	3 4 *m*
λ Tauri...	3 54·5 ...	12 10 N. ...	,, 4,	18 29 *m*
R Canis Majoris ...	7 14·5 ...	16 12 N. ...	,, 2,	23 33 *m*
			,, 4,	2 49 *m*
S Cancri	8 37·5 ...	19 26 N. ...	,, 6,	22 13 *m*
W Virginis	13 20·3 ...	2 48 S. ...	,, 2,	3 0 *m*
U Herculis	16 20·9 ...	19 9 N. ...	,, 8,	*M*
W Herculis	16 31·3 ...	37 34 N. ...	,, 4,	*M*
R Lyræ	18 51·9 ...	43 48 N. ...	,, 3,	*M*
Y Cygni	20 47·6 ...	34 14 N. ...	,, 4,	2 0 *m*
			,, 7,	1 54 *m*
δ Cephei	22 25·0 ...	57 51 N. ...	,, 4,	6 0 *m*
			,, 5,	21 0 *M*

M signifies maximum ; *m* minimum.

Meteor-Showers.

	R.A.	Decl.	
Near η Persei	42° ...	56° N. ...	Very slow ; faint.
,, ζ Tauri	80 ...	23 N. ...	Taurids II. Max. Dec. 6. Slow, brilliant.
,, δ Geminorum ...	110 ...	24 N. ...	Rather swift.
,, β Ursæ Majoris ...	163 ...	58 N. ...	Very swift ; streaks.

GEOGRAPHICAL NOTES.

AT the usual meeting of the Royal Geographical Society on Monday, Mr. J. Thomson read before a large audience a paper on "A Journey to the Atlas Mountains." He gave a most interesting account of the scenes visited, in the course of his trip, by himself and his companion, Mr. Harold Crichton-Browne. Describing some of the practical results, he said they had ascended and crossed the Atlas Chain in no fewer than six different places besides making various subsidiary trips into the lower ranges. A large series of barometric and boiling-point observations have been taken, which would assist in forming a more accurate idea of the general elevation of the range. Several glens had been explored, and the head-waters of some important streams had been mapped out. New and important light had been thrown upon the geological structure of the mountains. A small collection of plants from the higher altitudes had been made, and finally a series of photographs (which were exhibited) of the mountains, the inhabitants, and their houses have been obtained. He had reached an altitude in the mountains 1300 or 1500 feet higher than any other traveller.

THE December meeting of the Royal Geographical Society will be held on Monday, the 17th, at the University of London, instead of Monday, the 10th, as announced in the sessional programme. Colonel R. G. Woodthorpe will read a paper on explorations on the Chindwin River, Upper Burmah.

THE Russian Expedition for the exploration of Tibet, organized by the late General Prjevalsky, is, notwithstanding the death of the famous explorer, to be despatched on its mission. This announcement was made by M. Semenow, the Vice-President of the Russian Geographical Society, at a meeting held by the Society in honour of General Prjevalsky.

THE RENAISSANCE OF BRITISH MINERALOGY.[1]

AN ideal Presidential address should treat, not of a special point in the science of interest to a section only of the Society, but of the science in its broader aspects ; and the simplest permanent arrangement of this kind is that which makes it deal with the progress of the Society or of the science during the interval which has elapsed since the delivery of the next preceding address.

But in the case of our own Society we labour under special disadvantages, whether the address is to be on a specific subject or on the progress of the science. Not only is the Society small, but the number of its members able to devote any large part of their time to pure mineralogy is far smaller still. Hence if a set address were expected from the President we should be unnecessarily limited in our selection for that office. Many of our ablest members, men who would make the best of Presidents, men of wide culture and extensive general knowledge, men endowed with ideas and the power of expressing them, men who would bring to us a large experience obtained on the executive of other and larger Societies, though willing, nay anxious, to help us in the management of the affairs of the Society, would be prevented from giving us their services in the chair, owing to the sheer impossibility of devoting the requisite time and thought to the preparation of a purely mineralogical address such as they would consider worthy at once of the Society and of their own reputation.

Again, the number of our London meetings has been up to the present only three a year, and, as far as we can see, it is not yet desirable to increase their frequency. To set aside annually one-third, or even one-fourth, of the time of the Society for consideration of the views of the President, or of the progress and past work of the Society, would seem to be wanting in regard for proportion. A few minutes spent by the members in turning over the pages of the *Magazine* will give a better idea of the work of the Society, and be at the same time more exhilarating, than any summary a President can make. A report by the Council on the finance and general business, as brief as it can be made, seems to me sufficient for all reasonable purposes, and least wasteful of the time of the members and officers.

I have referred to the *Magazine*, and have said that a good idea of the work of the Society may be obtained in a few minutes by turning over the pages of one of its volumes. It may be cast in our teeth that the volume is small, but we can proudly and truly retort that few volumes of the same size furnish so vast an amount of heavy reading. The density, indeed, is prodigious—not that of lead, but of gold, refined gold. The volume is intended for transmission to all posterity, and not as a mere addition to the ephemeral literature and scientific gossip of a too prolific century. The present generation, by its careful use of the volume, will doubtless help it to reach its destination.

Bulky publications are, indeed, matters for shame rather than pride : they are the immediate ruin of a small Society, a perennial burden to librarians, and, as their contents are never completely indexed, a terror to subsequent investigators. The Ancients not unwisely refrained from the invention of printing ; they recognized that their duty to themselves was to read only what was worth the vast labour of transcription, and that their duty to posterity was to transmit to it only their masterpieces ; when even these became burdensome, an incendiary, doubtless a librarian, quickly reduced their volume. But for us Moderns the cost of multiplication of copies has become so small that everything, good or bad, is printed and preserved ; and it becomes necessary to spend the greater part of one's life in the preparation and study of indexes rather than of the literature itself. It would be an immense boon to mankind if some impartial and perfect tribunal could be empowered to do on the large scale what the curate and barber did so satisfactorily with Don Quixote's books on the small scale—distinguish the worthy from the worthless, and relentlessly annihilate that which ought not to cumber our shelves or demand even a passing glance.

I have said that the number of our members is small. I am not sure that it would be politic as yet to increase it. Members who have a living interest in mineralogy are most valuable, and of such we cannot have too many ; but mere subscribers of paltry gold would eventually be a source of weakness. After encouraging the Society to extravagant expenditure, they would fall away and leave it in the lurch.

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[1] Extracted from an address by Mr. Fletcher, the retiring President, at the annual meeting of the Mineralogical Society, October 30, 1888.

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